ABSTRACT

A thermal anemometer or mass flow meter having temperature and flow velocity sensor elements is provided in which a thin film temperature sensor is provided in the heated sensor of the fluid velocity sensor element of the system. The thin-film sensor is captured at least partially within a spacer or interface member, the spacer being received within a housing. The thermal anemometer is constructed to offer sufficient precision and accuracy in its design to be suitable for sensitive scientific and industrial applications. This goal is achieved while using cost effective parts – as in the thin film temperature sensor(s) – in connection with a construction approach minimizing or eliminating gaps or other system configuration variability.